REMARKS/ARGUMENTS

Applicant has amended claim 1 currently on file to clarify that the device is a hand-held electronic device having a keyboard mounted within a face thereof.

Consequential amendments have been to claims 7 and 8 to remove subject matter introduced into amended claim 1 submitted concurrently herewith and to correct dependencies and minor grammatical issues.

There are currently claims 1 through 10 and 12 through 26 pending in this application.

Additionally, Applicant has amended description paragraph 0005 to incorporate consistory clauses commensurate with the scope of the broadest independent claims as submitted concurrently herewith.

Applicant gratefully acknowledges the thorough examination to date and has made an effort to fully respond to all of the issues raised by the Examiner. Applicant has taken care and believes that no new matter has been introduced by way of this response. Reconsideration of the application in view of the foregoing amendments and following remarks is respectfully requested.

EXAMINER'S RESPONSE TO APPLICANT'S ARGUMENTS

Applicant notes that in the response to the arguments set out in the most recent Office Action, the Examiner has acknowledged that Straayer *et al.* (US Patent No. 4,680,577) teaches away from Kocis *et al.* (US Patent No. 5,485,614).

Applicant repeats and relies on its allegations that it is not appropriate to merely switch the order of the references to overcome an argument of teaching away.

Additionally, the Examiner has indicated that the motivation being relied upon to combine the two references, with Kocis *et al.* being the primary reference and Straayer *et al.* being the secondary reference is that "it would simplify the control of the cursor since only one key would be needed instead of four".

Applicant notes that it has amended claim 1 to make clear, as is already set out in claim 15, that the device is a hand-held electronic device with a keyboard mounted within a face thereof. Applicant submits that it is important to take this context into account when determining what a person of ordinary skill in the art would consider to combine, in order to arrive at the impugned invention. In this case, Straayer *et al.* is directed to a full size keyboard, in which one of the keys is modified to act as a combined navigation and character key by applying four sensors and/or strain gauges, one on either side of the underlying keyboard stalk. Applicant respectfully submits that a person of ordinary skill in the art would not be motivated to incorporate such a modification in order to adapt the teachings of Kocis *et al.* to a hand-held electronic device with a keyboard mounted in a face thereof, so that cursor control could be effected by a single key rather than four.

Further, Applicant repeats and relies on its submissions set out in its earlier response to the Office Action that Kocis *et al.* only allows for two modifications, neither of which is satisfied by the Straayer *et al.* reference.

On page 4 of the Office Action, the Examiner contends that the only difference between the Lee reference which is directed to a hand-held device and Straayer *et al.* is a size, "which would not hinder one skilled in the art from using the character/navigation key of Straayer *et al.* in the hand-held device of Lee". Applicant respectfully disagrees. As indicated above, the implementation of Straayer *et al.* is the imposition of four sensors and/or strain gauges, one on each side of the keyboard stalk. Manifestly, when the keyboard is mounted in a face of the hand-held electronic device, there is no room for the provision of such switches on the keyboard stalk of one of the keys. Indeed, Applicant notes that in most

implementations of integrated keyboards within a hand-held device, keyboard stalks are not provided but alternative mechanisms for implementing the keyboard are used. Such implementations are therefore incompatible with the notion of applying a series of four sensors and/or strain gauges on either side of the keyboard stalk.

CLAIMS 1, 2, 4-7 AND 21-25

The Examiner has rejected claims 1, 2, 4-7 and 21-25 as being obvious and unpatentable over Kocis *et al.* in view of Straayer *et al.* Applicant notes that Kocis *et al.* do not disclose the combined character and navigation key being displaceable from an un-depressed position to a plurality of detectable input positions including a character input position corresponding to a character input for a displayable character and at least one navigation control input position corresponding to a navigation control input for movement of a navigation indicator on the display screen. Additionally, Kocis *et al.* do not disclose a keyboard mounted within a face of a hand-held electronic device.

Applicant repeats and relies upon its submission that there is no motivation to combine Kocis *et al.* with Straayer *et al.* in the context of arriving at a hand-held electronic device with a keyboard mounted within a face of the device. Moreover, Applicant submits that neither of the two cited references disclose a hand-held electronic device with a keyboard mounted within a face of the device.

Applicant repeats and relies upon its submission that it knows of no authority for the proposition, that, if a primary reference A and a secondary reference B are shown not to have any motivation to combine, as acknowledged by the Examiner herein, there may nevertheless be a motivation to combine reference B as a primary reference in view of reference A as a secondary reference, especially where, as in the present case, the new primary reference B predates new secondary reference A, and new secondary reference A expressly disavows the teaching relied upon in new primary reference B.

Applicant notes that despite raising this argument previously, the Examiner has not cited any authority for this proposition.

Applicant repeats and relies upon the statement in the decision of *KSR* [*KSR International Co. v. Teleflex Inc.* 82 USPQ (2d), 1385 (2007) at 1395] to the effect that:

> "When the prior art teaches away from combining certain known elements, discovery of successful means of combining them is more likely to be non-obvious".

Applicant further respectfully repeats and relies upon the USPTO's published examination guidelines for determining obviousness under 35 USC 103 in view of the *KSR* decision. The guidelines, issued November 6, 2007 (http://www.USPTO.gov/web/offices/com/sol/og/2007/week45/patguide.htm), identify that:

> "The key to supporting any rejection of 35 USC is a clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in KSR noted that the analysis supporting a rejection under 35 USC should be made explicit. The Court in *In Re Kahn* stated that "[R]ejections on obviousness could not be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." (82 USPQ 2d at 1396) [Emphasis added].

Applicant notes that this was not done in the present instance, where the motivation to combine was stated to be to "simplify the control of the cursor since only one key would be needed instead of four".

Applicant also notes that this motivation is different from the motivation cited in the earlier May 15, 2008 Office Action, in which it was stated that the combined character would "allow for easier and more accurate control of the cursor".

Applicant presumes that the reliance by the Examiner on a new motivation to combine amounts to a withdrawal of the earlier motivation to combine.

Further, Applicant points out that the now primary Kocis *et al.* reference teaches two very clear aspects of the environment of that invention. First, the Kocis *et al.* is directed to a pointing device for a very small personal computer system (see column 1, lines 45, 49 – 50; column 3, lines 7 and 8; column 6, lines 13 – 15). Second, the Kocis *et al.* reference clearly indicates that the pointing device disclosed therein is to "be added to most portable computer systems by making only two alterations in the system design: 1) additions must be made to the keyboard controller micro code, and 2) a pointing device interrupt output must be added to the keyboard controller". (Column 7, lines 43 – 49) [Emphasis added].

It is submitted that neither of these requirements, clearly set out in the primary Kocis *et al.* reference is met by the combined character and navigation key disclosed in the Straayer *et al.* reference.

Further, claim 1 as amended and claim 15 are directed to a hand-held electronic device in which a keyboard is mounted within a face thereof. In this regard, attention is drawn to Figures 1 and 2 of the Straayer *et al.* reference, in which additional hardware features are required to implement sensors and/or strain gauges on all four sides of the keystalk in order to provide the pointing capability. Applicant submits that these features, which include in the embodiment of Figure 1, sensors or strain gauges (26, 28, 34 and 36) and in the embodiment of Figure 2, sensors (64 and 66), would be difficult to introduce into a small form factor keyboard especially one intended for a notebook or other portable computing device, in which the keyboard is smaller than normal, as taught in Kocis *et al.*, and in particular, a keyboard mounted in a face of a hand-held electronic device as now claimed herein.

Furthermore, as shown in both Figures 1 and 2 of the cited Straayer *et al.* reference, each of the sensors is accompanied by a wire (in Figure 1, wires 28, 30, 38 and 40 and in the case of Figure 2, wires 68 and 70), which must be connected as shown in Figure 3 to a signal conditioning circuit and then to the CPU. These additional wires will also occupy space, which is at a premium, and manifestly not available in a notebook computer-sized keyboard, much less a hand-held electronic device having a keyboard mounted in a face thereof.

With regard to the second differentiating factor, Figure 3 of Straayer *et al.* demonstrates that the keyswitch sensors follow a different path to the CPU than the keyboard. As such, they do not fall within the limitation imposed in the Kocis *et al.* reference that the modifications to the computer system be additions to the computer keyboard controller micro code and the addition of a pointing device interrupt output. Instead, key switch sensor signal conditioning software would have to be added and software added to the CPU, which is expressly differentiated from the keyboard software already in place, and constitutes a much more invasive and less transparent alteration to the existing system.

For all of the foregoing reasons, Applicant respectfully submits that, rather than the vague and unarticulated basis for motivation to combine proffered by the Examiner, either in this Office Action or in the previous one, Applicant has pointed out that a person of ordinary skill in the art, presented with the Kocis *et al.* reference, and the desire to develop a hand-held electronic device with a keyboard mounted within a face thereof, would not have been motivated to combine it with the methodology taught in the Straayer *et al.* reference, because of the additional complexity and lack of transparency in the operating system software and the additional components which would cause difficulty in the cramped quarters of a notebook-sized keyboard, much less a hand-held electronic device with a keyboard mounted in a face thereof.

Further, as indicated above, neither Kocis *et al.* nor Straayer *et al.* teach a hand-held electronic device having a keyboard mounted within a face thereof.

Because the objected-to claims 2, 4-7 and 21-25 are all ultimately dependent from a now-allowable base claim (independent claim 1), Applicant submits that the objection to these claims is also respectfully traversed.

Further, Applicant repeats and relies on its submissions in the previous Office Action with regard to its contention that Straayer *et al.* do not in any event disclose that the character or navigation key is a space bar key and that the displayable character is the space character as claimed in dependent claim 2 herein.

CLAIMS 3, 9-10 AND 12-14

The Examiner has rejected claims 3, 9-10 and 12-14 as being obvious and unpatentable over Kocis *et al.* in view of Straayer *et al.* and further, in view Osawa *et al.* (US Patent Application No. 2001/0033270).

Applicant repeats and relies upon its submission set out above and in previous Office Actions, to the effect that there is no need, much less any motivation, to combine the cited Kocis *et al.* reference with the cited Straayer *et al.* reference, irrespective of the order in which they are presented.

Furthermore, Applicant submits that Osawa *et al.* do not contemplate a character insertion mode, as distinguished from a display navigation movement mode, by the inculcation of a second command key, whether or not simultaneously depressed as claimed herein. Accordingly, Applicant submits that there is no motivation to combine the Osawa *et al.* reference with any of Straayer *et al.* or Kocis *et al.*

Applicant further repeats and relies on its submissions early in this Office Action that the methodology disclosed by Straayer *et al.* to incorporate a single character/navigation key involves the use of four sensors and/or strain gauges, one mounted on either side of the stalk of the keyboard, and calls for numerous wires threaded through the system to the processor for processing thereof which is incompatible with the Osawa *et al.* reference.

Further, in any event, Applicant repeats and relies upon its submissions in previous Office Actions to the effect that the Examiner lacks the requisite motivation to combine the Straayer *et al.* reference and the Osawa *et al.* reference on the basis that Straayer *et al.* is directed to a desktop keyboard, which is sufficiently large that the index fingers of the user may rest in the home position above the designated F character key throughout the course of the user's interaction with the keyboard (in this regard, the Examiner is referred to column 1, lines 28 – 32 thereof, to the effect that it is not advantageous to have the operator move its fingers from the home position, and column 5, lines 21-26 of the cited reference, in which it is indicated that it is advantageous for the user to maintain its index fingers a large percentage of the time above the F character key).

By way of contrast, in Osawa *et al.*, the reference is directed to a key input device for a portable telephone, which, as shown in the various views of Figure 3 thereof, is configured so that key input, including that of the multi-position switch, is presumably effected by intermittently positioning a finger, typically the thumb, over each input key as needed, but in the ordinary course of the operation, the user's fingers would not linger over any of the input keys thereof.

Additionally, Applicant notes that the implementation of the keyboard in the Osawa *et al.* reference does not provide a keyboard stalk to which can be attached four sensors and/or strain gauges, one on each side thereof, in order to implement the combined character/navigation key feature of Straayer *et al.*

Finally, Applicant notes that the Examiner purports to combine a total of three references in order to arrive at the claimed invention. Applicant suggests that the use of such a large number of references in a mosaic, speaks poignantly to the fact that the claimed invention is not obvious.

In respect of claim 13, the Examiner contends that, notwithstanding his acknowledgment that Osawa *et al.* do not disclose the other switches as being non-dome contact switches, this would be a designer's choice. Applicant notes that it has specifically taught in the present application, at paragraph 41, thereof, a number of embodiments in which one is the use of dome switches for all of the contact switches. Accordingly, the restriction in claim 13 in that the new embodiments in which the first and second switches are non-dome contact switches constitutes a new and inventive feature which, it is respectfully submitted, the Examiner cannot blithely explain away on the basis of obviousness as being a matter of "design choice", when the cited Osawa *et al.* reference has absolutely no indication of this possibility.

In any event, inasmuch as all of these claims are dependent from a now-allowable base claim, Applicant submits that the Examiner's rejection has been traversed.

CLAIM 8

The Examiner has rejected claim 8 as being obvious and unpatentable over Kocis *et al.* in view Straayer *et al.* in view of Osawa *et al.* in further view of Lee *et al.* (US Publication No. 2002/019957).

Applicant repeats and relies upon its submission set out above and in previous Office Actions to the effect that there is no motivation to combine the cited Kocis *et al.*, Straayer *et al.* and Osawa *et al.* references, irrespective of the order in which they are presented.

With respect to claim 8, the Examiner has acknowledged that Kocis *et al.*, Straayer *et al.* and Osawa *et al.* do not disclose an electronic hand-held device wherein the display screen is mounted within the face, but contends that Lee *et al.* disclose a hand-held device with a display screen being mounted within the face, citing as an example, Figure 1 and case 13 disclosed therein. The Examiner further contends that the keyboard of Lee is mounted in the face of the device by virtue of having the connector in the face and contends that in claim 1, the display screen of Lee is also mounted in the face as clearly shown in Figure 1.

The reference numeral 13 in the Lee *et al.* reference submitted in the Applicant's earlier responses to various Office Actions, is directed, not to a face, but rather to a case of a hand-held device. As is taught in Lee *et al.* and as shown in Figure 2 thereof, in fact, the keyboard is not mounted in the face in which the display screen is mounted, namely the front face of the case 13, but rather through a connector in an adjacent face namely the bottom face of the case 13, as shown in paragraph 26 thereof, in which the connector is provided "at a lower end portion" of the PDA 10.

Further, the Examiner's contention that Figure 1 thereof shows the display screen of Lee *et al.* being mounted in the face in which the keyboard lies is inaccurate. The keyboard is mounted in the bottom face, but is oriented so that it is parallel with the front face of the case 13, in which the display is shown. Applicant submits that this is not the same thing.

Finally, Applicant notes that the Examiner purports to combine a total of four references in order to arrive at the claimed invention. Applicant suggests that the use of such a large number of references in a mosaic, speaks poignantly to the fact that the claimed invention is not obvious.

In any event, inasmuch as claim 8 is ultimately dependent from a now-allowable base claim (independent claim 1), Applicant respectfully that the Examiner's rejection has been traversed.

CLAIMS 15-17 AND 26

The Examiner has rejected claims 15-17 and 26 as being obvious and unpatentable over Lee *et al.* in view of Kocis *et al.* in further view of Straayer *et al.*

Applicant repeats and relies upon its submissions, set out above and earlier responses to Office Actions, to the effect that there is no motivation to combine the cited Kocis *et al.* reference and Straayer *et al.* reference, irrespective of the order in which they are presented.

Further, neither Lee *et al.* nor Straayer *et al.* teach or suggest the simultaneous depressing of a command key in the space bar key or indeed any other single character and navigation key in a navigation control input position as called for by independent claim 15.

Accordingly, Applicant further submits that there is no motivation to combine the cited Lee *et al.* reference with either of the Kocis *et al.* or Straayer *et al.* references.

Finally, Applicant notes that the Examiner purports to combine a total of three references in order to arrive at the claimed invention. Applicant suggests that the use of such a large number of references in a mosaic, speaks poignantly to the fact that the claimed invention is not obvious.

Inasmuch as claims 16-17 and 26 are ultimately dependent from a now-allowable base claim (independent claim 15), Applicant respectfully submits that the Examiner's rejections have been traversed.

CLAIMS 18-20

The Examiner has rejected claims 18-20 as being obvious and unpatentable over Lee *et al.* in view of Kocis *et al.* in view of Straayer *et al.* and in further view of Osawa *et al.*

Applicant repeats and relies on its submissions, set out above, and in earlier responses to various Office Actions, to the effect that there is no motivation to combine the cited Kocis *et al.*, Straayer *et al.*, and Osawa *et al.* references, irrespective of the order in which they are presented.

Moreover, Applicant takes issue with the contention of the Examiner at page 22 of the present Office Action to the effect that there would a motivation to combine Lee *et al.* with the teachings of Kocis *et al.* and Straayer *et al.*, because the incorporation of the command key and multi-purpose key switch of Straayer *et al.* and the keyboard of Lee *et al.* would allow for redundant cursor movement and act as a failsafe in case one of the cursor movement systems fails to operate, and to prevent accidental movements of the cursor.

As set out in Applicant's earlier responses to various Office Actions, Lee *et al.* is directed to a personal digital assistant (PDA) having a touch screen 14. There is no indication that the PDA has any form whatsoever of cursor control. The need for any such cursor control would be obviated by the touch screen nature of the display 14, which would permit the user to position the cursor anywhere through the display simply by tapping at the desired location on the screen. Moreover, inasmuch as Lee *et al.* disclose a portable keyboard, whose objective is to dispense with a symbol region so as to increase the effective display area of the PDA as taught in paragraph 24 thereof, there would be no motivation to create a redundant system.

Further, Lee *et al.* teach at paragraph 6 thereof, that it would be disadvantageous to have a keyboard of any significant size. Accordingly, there

would be no motivation to combine the compact keyboard of Lee *et al.* with any features that would increase the size of the keyboard solely for the purpose of providing such redundant capability, such as the features disclosed by Straayer *et al.*, which incorporate a series of switches on either side of the stalk of the keyboard.

Finally, Applicant notes that the Examiner purports to combine a total of three references in order to arrive at the keyboard stalk at the claimed invention. Applicant suggests that the use of such a large number of references in a mosaic, speaks poignantly to the fact that the claimed invention is not obvious.

In any event, inasmuch as these claims are ultimately dependent from the now-allowable base claim, Applicant submits that the Examiner's objections have been traversed.

Favourable reconsideration and allowance of this application are respectfully requested. Should the Examiner believe however that additional amendments to the claims may be required to secure allowance of this application; he is invited to telephone the undersigned at the below-noted number to facilitate further prosecution of this application.

Respectfully Submitted,
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